

M is a hydrogen atom, an ammonium ion, a monovalent metal ion or an equivalent of a divalent metal ion of the groups Ia, IIa, IIb, IVa or VIIib of the Periodic Table of the Elements;

R<sup>1</sup> is OH or NR<sup>4</sup>R<sup>5</sup>, wherein R<sup>4</sup> and R<sup>5</sup> independently of one another are H or C<sub>1</sub>-C<sub>6</sub>-alkyl;

R<sup>2</sup> is H or an alkyl, alkenyl, cycloalkyl or aryl group, [it being possible for these groups to have] wherein the alkyl, alkenyl, cycloalkyl, and aryl group are unsubstituted or substituted with 1, 2 or 3 substituents which are chosen independently of one another from C<sub>1</sub>-C<sub>6</sub>-alkyl, OH, O-C<sub>1</sub>-C<sub>6</sub>-alkyl, halogen and CF<sub>3</sub>; and

R<sup>3</sup> is COOM, SO<sub>3</sub>M, COR<sup>4</sup>, CONR<sup>4</sup>R<sup>5</sup> or COOR<sup>4</sup>[, where M, R<sup>4</sup> and R<sup>5</sup> are as defined above, or, if R<sup>2</sup> is aryl, which may be unsubstituted or substituted as defined above, is also H,]; or

R<sup>3</sup> is H, provided that when R<sup>3</sup> is H R<sup>2</sup> is unsubstituted aryl or aryl substituted with 1, 2 or 3 substituents which are chosen independently of one another from C<sub>1</sub>-C<sub>6</sub>-alkyl, OH, O-C<sub>1</sub>-C<sub>6</sub>-alkyl, halogen and CF<sub>3</sub>.

[and the salt thereof.]

2. (Amended) [A] The sulfenic acid compound as claimed in claim 1 [or of the formula (I)], wherein

M is an ammonium or alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion.

3. (Amended) [A] The sulfenic acid compound as claimed in claim 1 [or 2 of the formula (I)], wherein

R<sup>1</sup> is OH or NH<sub>2</sub>.

3. (Amended) [A] The sulfenic acid compound as claimed in claim 1 [of the formula (I)],  
wherein

R<sup>2</sup> is a hydrogen atom or an alkyl or aryl group which [may have] are unsubstituted or substituted with one or two hydroxyl or alkoxy substituents.

5. (Amended) [A] The sulfenic acid compound as claimed in claim 1 [of the formula (I)],  
wherein

R<sup>3</sup> is COOM or COOR<sup>4</sup>[, where M and R<sup>4</sup> are as defined in claim 1].

6. (Amended) [A] The sulfenic acid compound as claimed in claim 1 [of the formula (I)],  
wherein

M is an alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion;

R<sup>1</sup> is OH or NH<sub>2</sub>;

R<sup>2</sup> is H or alkyl; and

R<sup>3</sup> is COOM or COOR<sup>4</sup>, [M being as defined above and] wherein R<sup>4</sup> [being] is H or C<sub>1</sub>-C<sub>6</sub>-alkyl.

7. (Amended) [A] The sulfenic acid compound as claimed in claim 4 [of the formula (I)],  
wherein

R<sup>2</sup> is aryl, which [may have] is unsubstituted or substituted with one or two hydroxyl or alkoxy substituents; and

R<sup>3</sup> is H.

8. (Amended) [A] The sulfenic acid compound as claimed in claim 7 [of the formula (I)],  
wherein

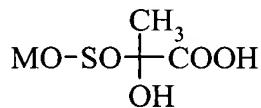
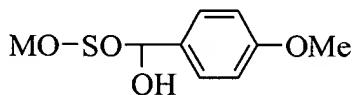
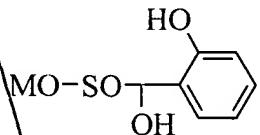
R<sup>2</sup> is hydroxyphenyl or C<sub>1</sub>-C<sub>4</sub>-alkoxyphenyl.

9. (Amended) [A] The sulfenic acid compound as claimed in claim 1 [of the formula (I)],  
wherein

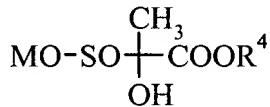
M is an alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion;

- $R^1$  is OH or  $NH_2$ ;  
 $R^2$  is hydroxyphenyl or  $C_1-C_4$ -alkoxyphenyl; and  
 $R^3$  is a hydrogen atom.

10. (Amended) [Compounds] A compound of the formulae [(M = Na, K, Mg, Ca, Zn)]:



or



wherein M is Na, K, Mg, Ca, Zn and  $R^4$  is  $CH_3$  or  $C_2H_5$ .

11. (Amended) [A] The mixture of a sulfinic acid compound as claimed in one of claims 1 to 10 with the sulfonic acid corresponding to the sulfinic acid compound or the salt thereof and with or without the corresponding sulfite.

12. (Amended) [A] The mixture as claimed in claim 11 having the following composition:

Compound of the formula (I) 20-99% by weight

Sulfonic acid corresponding to the compound of formula (I) 0-60% by weight

$M_2SO_3$  0-40% by weight

13. (Amended) [A] The mixture as claimed in claim 12 having the following composition:

2-Hydroxyphenylhydroxymethylsulfinic acid, sodium salt: 61-98% by weight

2-Hydroxyphenylhydroxymethylsulfonic acid, sodium salt: 2-15% by weight  
Sodium sulfite: 0-37% by weight

14. (Amended) [A] The mixture as claimed in claim 12 having the following composition:

4-Methoxyphenylhydroxymethylsulfinic acid, sodium salt: 60-98% by weight  
4-Methoxyphenylhydroxymethylsulfonic acid, sodium salt: 2-15% by weight  
Sodium sulfite: 0-38% by weight

15. (Amended) [A] The mixture as claimed in claim 12 having the following composition:

2-Hydroxy-2-sulfinatoacetic acid, disodium salt: 40-73% by weight  
2-Hydroxy-2-sulfonatoacetic acid, disodium salt: 2-7% by weight  
Sodium sulfite: 0-33% by weight  
Water: 5-30% by weight

16. (Amended) [A] The mixture as claimed in claim 12 having the following composition:

2-Hydroxy-2-sulfinatoacetic acid, zinc salt: 20-70% by weight  
2-Hydroxy-2-sulfonatoacetic acid, zinc salt: 5-60% by weight  
water: 5-30% by weight

17. (Amended) [A] The mixture as claimed in claim 12 having the following composition:

2-Hydroxy-2-sulfinatopropionic acid, disodium salt: 38-70% by weight  
2-Hydroxy-2-sulfonatopropionic acid,

disodium salt: 5-30% by weight  
Sodium sulfite: 0-33% by weight  
Water: 5-30% by weight

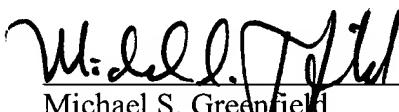
12 (Amended) [A] The mixture as claimed in claim 12 having the following composition:

Ethyl 2-hydroxy-2-sulfinatopropionate,  
sodium salt: 60-80% by weight  
Ethyl 2-hydroxy-2-sulfonatopropionate,  
sodium salt: 0-5% by weight  
Sodium sulfite: 0-5% by weight  
Water: 5-20% by weight.

*Please add new claims 23-25.*

- 13 (New) A method of reducing a chemical compound, the method comprising contacting the compound with a sulfinic acid compound according to any one claims 1-10 under conditions that permit reduction.
- 14 (New) The method according to claim 14, wherein the sulfinic acid compound is a cocatalyst in emulsion polymerization or redox catalyst system in plastics production.
- 15 (New) The method according to claim 14, wherein the sulfinic acid compound is a reducing agent component for textile printing, in textile bleaching or vat dyeing or a reducing bleach for mineral refining or fiber finishing.

Respectfully submitted,

  
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